AMENDMENTS TO THE CLAIMS:

Claims 1, 3-5, 8, are 10 are pending in this application. Original claims 1, 3-5, 8, are 10 have been amended. Claims 2, 6, 7, 9, 11, and 12 have been cancelled.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): An authentication device <u>including a detection</u> section generating a signal, an authentication section that authenticates the identity of a person based <u>on time-series data, and a sensor comprising</u>:

a detection <u>circuit</u> section <u>for generating a signal</u>, that detects variance in friction between a finger and a surface of the detection section when relative movement between the surface of the detection section and the finger occurs; and

a piezoelectronic element protruding therefrom, and

an authentication section that authenticates <u>the identity of</u> a person based on time-series data representing variance in friction detected at the detection section,

wherein said piezoelectronic element detects a fingerprint and variance in friction when relative movement between the piezoelectronic element and a finger occurs, said detection circuit section generates a signal representing a variance in friction between the piezoelectronic element and finger based on the detected fingerprint, and said authentication section authenticates the identity of a person based on time-series output volatage data representing variance in friction generated by the

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detection circuit section.

Claim 2 (Cancelled):

Claim 3 (Currently Amended): The authentication device according to claim 1, wherein

the authentication section comprises:

a template storing section that stores template data to be compared with time-series data

representing variance in friction detected at the detection <u>circuit</u> section;

a similarity calculation section that calculates similarity between time-series data representing

variance in friction detected at the detection <u>circuit</u> section and the template data stored in the

template storing section; and

a similarity determination section that determines whether the similarity calculated in the

similarity calculation section is greater than a certain similarity or not.

Claim 4 (Currently Amended): The authentication device according to claim 3, wherein

the similarity calculation section calculates similarity between the time-series data and the template

data by using a DP matching technique.

Claim 5 (Currently Amended): The authentication device according to claim 3, wherein

the authentication section comprises:

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a data quality determination section that determines whether time-series data representing

variance in friction detected at the detection <u>circuit</u> section is appropriate for authentication or not,

and wherein

the similarity calculation section calculates similarity between the time-series data

determined appropriate for authentication at the data quality determination section and the template

data.

Claim 6 (Cancelled):

Claim 7 (Cancelled):

Claim 8 (Currently Amended): An The authentication system according to claim $\underline{1}[[6]]$,

wherein the detection circuit sectiondevice compresses time-series data obtained by detecting

variance in friction between a finger and the detection circuit sectiondevice to send out the

compressed data to the authentication device, and wherein the authentication device decompresses

the compressed data sent from the detection circuit section device to recover the time-series data and

performs authentication based on the recovered time-series data.

Claim 9 (Cancelled):

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Claim 10 (Currently Amended): Then sensor according to claim 1[9], comprising:

a supporting section that supports a finger placed on the sensor,

wherein said supporting section has two slopes lowering toward the center at both sides, with

a center part in the middle of the slopes and being provided with a rectangular aperture guided along

slopes and on each side, and the piezoelectronic element detection section is located to touch the

finger supported by the supporting section.

Claim 11 (Cancelled):

Claim 12 (Cancelled):

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